P a t e n t C l a i m s :

1. A mobile station adapted to be used in a radio communications system, said mobile station including:

receiver means (212) adapted to receive blocks of distorted information bits at a first rate, and

first detecting means (206) adapted to detect information bits from said distorted information bits,

c h a r a c t e r i z e d by further including

second detecting means (213) adapted, when the quality of said received blocks of information bits is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means (206), and

estimation means (211) adapted to estimate the quality of one or more of said received blocks of information bits and, based thereon, to determine whether to use said first or said second detecting means when detecting information bits.

2. A mobile station according to claim 1, c h a r a c t e r i z e d in that said mobile station is adapted, when operated in a first mode in which said received blocks of information bits are received at said first rate and said first detecting means (206) is used, and when said estimated quality is above a predetermined first threshold, to change to a second mode of operation in which said blocks of information bits are received at said first rate and said second detecting means (213) is used.

3. A mobile station according to claim 2, c h a r - a c t e r i z e d in that said mobile station is adapted, when operated in said first mode or said second mode and when said estimated quality is above a predetermined second threshold, to change to a third mode of operation in which said blocks of information bits are received at a second rate higher than said first rate and said second detecting means (213) is used.

4. A mobile station according to claim 3, c h a r - a c t e r i z e d in that said mobile station is adapted, when operated in said third mode and when said estimated quality is below a predetermined third threshold, to change to said second mode of operation.

5. A mobile station according to claim 3, c h a r - a c t e r i z e d in that said mobile station is adapted, when operated in said second mode or said third mode and when said estimated quality is below a predetermined fourth threshold, to change to said first mode of operation.

6. A method of transmitting information from a first communications device to a second communications device in a radio communications system, said method including:

receiving, in said second communications device, blocks of information bits, transmitted at a first rate from said first communications device to said second communication device via a communications link, as blocks of distorted information bits, and

performing a first detection of information bits from said distorted information bits,

c h a r a c t e r i z e d by further including:

estimating the quality of one or more of said distorted blocks of information bits, and, based thereon, determining whether to perform said first detection or, when the quality of said received blocks of information bits is above a given level, to perform a second less computation-demanding detection of information bits from said distorted information bits.

7. A method according to claim 6, c h a r a c t e r i z e d in that said second detection is performed when said estimated quality is above a predetermined first threshold.

8. A method according to claim 7, c h a r a c t e r i z e d in that, when said blocks of information are received at said first rate and when said estimated quality is above a predetermined second threshold, said mobile station requests said base station to transmit said blocks of information at a second rate higher than said first rate.

9. A method according to claim 8, c h a r a c t e r i z e d in that, when said blocks of information are received at said second rate, and when said estimated quality is below a predetermined third threshold, said mobile station requests said base station to transmit said blocks of information at a third rate lower than said second rate.

10. A communications system including at least one base station and at least one mobile station, wherein

said base station is adapted to transmit blocks of information bits at a first rate to said mobile station via a communications link, and

said mobile station includes receiver means (212) adapted to, as a result of said transmission, receive said transmitted blocks of information bits as blocks of distorted information bits, and includes first detecting means (206) adapted to detect information bits from said distorted information bits,

c h a r a c t e r i z e d in that said mobile station further includes

second detecting means (213) adapted, when the quality of said communication link is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means (206), and

estimation means (211) adapted to estimate the quality of said communications link and, based thereon, to determine whether to use said first or said second detecting means when detecting information bits.

11. A system according to claim 10, c h a r a c t e r i z e d in that said mobile station is adapted to use said second detecting means (213) when said estimated quality is above a predetermined first threshold.

12. A system according to claim 10, c h a r a c t e r i z e d in that said mobile station is adapted, when said estimated quality is above a predetermined second threshold, to allow said base station to transmit said blocks of information at a second rate higher than said first rate.

13. A system according to claim 10, characterized in that said mobile station is adapted, when said blocks of information are received at a second rate and when said estimated quality is below a predetermined third threshold, to request said base station to transmit blocks of information at a first rate lower than said second rate.

14. A system according to one or more of claims 10-13, characterized in that said system is a TDMA system, and said blocks of information are time-slots.